



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/029,150

12/31/2001

Young Jun Jung

K-0383

5205

34610

7590

08/10/2006

FLESHNER & KIM, LLP

P.O. BOX 221200

CHANTILLY, VA 20153

EXAMINER

CHEA, PHILIP J

ART UNIT

PAPER NUMBER

2153

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/029,150	Applicant(s) JUNG, YOUNG JUN	
	Examiner Philip J. Chea	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,7,9-13 and 15-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1,3,4,6,7,9-13 and 15-18 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to an Amendment filed May 18, 2006. Claims 1,3,4,6,7,9-13 and 15-18 are currently pending. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-4,7,9-11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernet et al. (US 5,764,645), herein referred to as Bernet, and further in view of Manor (US 2002/0089973).

As per claims 1,7, Bernet discloses receiving a message transmission request from a connectionless-oriented user, said request including a stream-based message and a destination address of said stream-based message (see column 7, lines 10-12);

determining whether any one of currently existing [connections] are connected to said destination address (see column 7, lines 10-14); and

sending a connection request to a connection manager to be connected to a connection-oriented service to the connectionless-oriented user (see column 4, lines 57-59), if it is determined that none of the existing [connections] are connected to said destination address (see column 7, lines 33-42).

Although the system disclosed by Bernet shows that there is a desire for a connectionless oriented user to communicate with a connection-oriented network, it fails to show that the communication is performed on the TCP level. Specifically, Bernet does not expressly disclose a socket management database that keeps track of the currently existing connections and does not show sending the connection request to be connected to a TCP layer.

However, Bernet shows the functionality of the invention on a lower ATM level, and implementing them to work with the upper layers of a network would have been an obvious modification of the system disclosed by Bernet, as evidenced by Manor.

Manor shows there is a need for varying the type of communication protocol used for transmission (e.g., changing from UDP/IP to TCP/IP) (see page 5, bottom of paragraph [0049]).

Given the teaching of Manor, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Bernet by varying the type of communication used, such as disclosed by Manor, in order to adapt to the quality of service.

In considering the socket management database, it is old and well known that sockets are used as a communication channel between two endpoints. Bernet has shown the step of determining whether any one of currently existing connections is available (connections database). Since Manor shows the desire to provide a UDP user a TCP connection, it would have been obvious to implement a socket database to keep track of open socket connections.

In considering sending the message to the TCP layer if it is determined that any one of said existing sockets is connected to said destination address, without making the connection request, since the socket is already open for communication and attached to the destination, a person of ordinary skill in the art would have found it obvious to use the open socket and not make a new connection request.

As per claims 3,9, Bernet in view of Manor further disclose creating a new socket connected to said destination address and attempting to be connected to said TCP layer (as discussed above, the use of sockets is old and well known in the art and would have been obvious to a person having ordinary skill in the art to create a socket to connect to a destination address in order to send information using the TCP protocol); and

storing a new file descriptor of said new socket in said database if said attempt is succeeded (i.e. a socket for every destination).

As per claims 4,10, Bernet in view of Manor further disclose newly forming a receiving module for said new socket (Manor shows the use of TCP to send and receive communication. At the time of the

Art Unit: 2153

invention, it would have been obvious for a person skilled in the art to form a receiving module for the new socket in order to receive communication).

As per claim 11, Bernet in view of Manor further disclose waiting to receive another connection request if said attempt is not succeeded (see Bernet column 7, lines 40-43).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernet in view of Manor as applied to claim 1 above, and further in view of Vincent et al. (US (US 6,839,732).

Although the system disclosed by Bernet in view of Manor shows substantial features of the claimed invention (discussed above), it fails to disclose informing said user of an incomplete message transmission, if not connected to TCP layer for a given period of time.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Bernet in view of Manor, as evidenced by Vincent et al.

In an analogous art, Vincent et al. discloses a socket pool for transmitting data, provided that there is an available socket in the pool to use for transmission further disclosing informing a user of an incomplete message if not connected to the TCP layer for a given period of time (see column 7, lines 16-34).

Given the teaching of Vincent et al., a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Bernet in view of Manor by informing the user of an incomplete transmission, such as disclosed by Vincent et al., in order to give the user a reasonable estimate of the pool size and resources required to process the request.

4. Claims 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Bernet in view of Manor as applied to claim 7 above, and further in view of Internet Protocol Specification.

As per claim 12, although the system disclosed by Bernet in view of Manor shows substantial features of the claimed invention (discussed above), it fails to disclose a message header including a message header indicator, a message length, a source address, a destination address and a message identifier.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Bernet in view of Manor, as evidenced by the Internet Protocol Specification.

In an analogous art, the Internet Protocol Specification that is used for transmission of data over an IP network discloses a message header including a header indicator (see page 11, Figure 4. [Version]), a message length (see page 11, Figure 4. [IHL]), a source address (see page 11, Figure 4. [Source Address]), a destination address (see page 11, Figure 4. [Destination Address]), and a message identifier (see page, Figure 4. [Protocol]).

Given the teaching of the Internet Protocol Specification, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Bernet in view of Manor by describing the message header that is used in an IP network, such as disclosed by the Internet Protocol Specification, in order to allow efficient transmission of data using IP packets.

As per claim 13, Bernet in view of Manor in view of the Internet Protocol Specification further disclose sending the message together with a header to TCP layer using a new socket (see Bernet column 8, lines 12-29).

As per claim 15, Bernet in view of Manor in view of Internet Protocol Specification disclose receiving a message transmission request from a connectionless-oriented user at a connection-oriented router (see Bernet column 7, lines 10-12);

formatting the message into a connection-oriented protocol data unit (PDU) including a source address of the connectionless-oriented user and a destination address (see Manor page 5, bottom of paragraph [0049]); and

transmitting the message through an existing connection-oriented socket connected to the destination address if the socket exists (see Bernet Fig. 7).

As per claim 16, Bernet in view of Manor in view of Internet Protocol Specification further disclose creating a new connection-oriented socket to the destination address if the existing connection-oriented socket does not exist (see Bernet Fig. 7); and

transmitting the message to the destination address using the new connection-oriented socket (i.e. new socket is now handling communication).

As per claim 17, Bernet in view of Manor in view of Internet Protocol Specification further disclose determining if the existing connection-oriented socket connected to the destination address exists by reading a database including all existing sockets (see Bernet Fig. 7).

As per claim 18, Bernet in view of Manor in view of Internet Protocol Specification further disclose that the connection-oriented router comprises a Transmission Control Protocol (TCP) router including a TCP layer (see Manor page 5, bottom paragraph [0049]).

Response to Arguments

5. Applicant's arguments with respect to claims 1,3,4,6,7,9-13 and 15-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Chea whose telephone number is 571-272-3951. The examiner can normally be reached on M-F 7:00-4:30 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/029,150

Page 7

Art Unit: 2153

Philip J Chea
Examiner
Art Unit 2153

PJC 7/31/06


ABDULLAH SALAD
PRIMARY EXAMINER